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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,613	10/24/2003	Soon-Hyeok Kwak	P-0603	7203
34610	7590	03/14/2006	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			VUONG, QUOCHIE B	
			ART UNIT	PAPER NUMBER
			2685	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/691,613

Applicant(s)

KWAK, SOON-HYEOK

Examiner

Quochien B. Vuong

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/17/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Information Disclosure Statement*

2. The information disclosure statement (IDS) submitted on 11/17/2004 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 6-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites "a signal amplifier for amplifying the AGC signal applied to the gain controller at a voltage level as much as the **modem** can recognize, and **transmitting the amplified AGC signal to the modem.**" which fails to point out and distinctly claim the subject matter because in the specification, especially figure 2 and

page 7, lines 17-19 show transmitting the amplified AGC signal to the transmission signal processing block 200, not the modem.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Wheatley, III (US 5,099,204).

Regarding claim 1, the AAPA (figure 1) discloses a transmission apparatus of a mobile communication terminal comprises: a modem (110) for outputting an intermediate frequency (IF) signal, and an auto gain control (AGC) signal; a gain controller (120) for adjusting a gain of the IF signal according to the AGC signal; and a transmission signal processing block (100) for converting the IF signal whose gain is adjusted, into a radio frequency (RF) signal, amplifying and bandwidth filtering the converted RF signal, then amplifying power of the RF signal as much as the RF signal can reach a receiving side, and emitting the amplified RF signal (page 1, line 17 – page 2, line 14). The AAPA does not show a power controlling circuit for adjusting the AGC signal according to temperature change of the terminal, and applying the adjusted AGC signal to the gain controller. However, Wheatley, III (figure 2) discloses a power controlling circuit (100) for adjusting the AGC signal according to temperature change of

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the terminal, and applying the adjusted AGC signal to the gain controller (120, 160) (column 4, line 51 – column 5, line 35). Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to adapt the power controlling circuit with temperature compensation of Wheatley, III to the transmission apparatus of AAPA to reduce burden for the modem.

Regarding claim 2, the AAPA and Wheatley, III disclose the apparatus of claim 1 above; in addition, the AAPA (figure 1) discloses wherein the transmission signal processing block (100) comprises: a mixer(130) for converting the signal whose gain is adjusted, into a RF signal; a drive amplifier (140) for amplifying the RF signal; a filter (150) for bandwidth filtering the amplified signal; and a power amplifier (160) for sufficiently amplifying power of the signal as much as the filtered signal can be transmitted to a receiving side through the air (page 2, lines 4-6).

Regarding claim 3, the modified transmission apparatus of AAPA which Wheatley, III would have the power controlling circuit positioning between the modem and the gain controller.

Regarding claims 4 and 5, the AAPA and Wheatley, III disclose the apparatus of claim 1 above; in addition, Wheatley, III (figure 2) discloses wherein the power controlling circuit comprises: a thermistor (112) and plurality of resistors (104, 106, 114) and would be obvious to be configured as recited in the claims for the same function as adjusting the gain with temperature compensation.

Regarding claim 6, the AAPA and Wheatley, III disclose the apparatus of claim 1 above; in addition, Wheatley, III (figure 2) discloses wherein the power controlling circuit

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(100) comprises: an AGC adjuster for adjusting an AGC signal of the modem according to temperature change of the terminal, and applying the adjusted AGC signal to the gain controller (120, 160); and a signal amplifier for amplifying the AGC signal applied to the gain controller, and transmitting the amplified AGC signal (column 4, line 51 – column 5, line 35).

Regarding claims 7 and 8, the AAPA and Wheatley, III disclose the apparatus of claim 6 above; in addition, Wheatley, III (figure 2) discloses wherein the power controlling circuit comprises: a thermistor (112) and plurality of resistors (104, 106, 114) and would be obvious to be configured as recited in the claims for the same function as adjusting the gain with temperature compensation.

Regarding claim 9, the AAPA and Wheatley, III disclose the apparatus of claim 6 above; in addition, Wheatley, III (figure 2) discloses wherein the signal amplifier is implemented using an operational amplifier (column 2, lines 16-21; and column 4, line 67 – column 5, line 2).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Le et al. (US 6,418,301) disclose methods for radio calibration at room temperature.

Johnson et al. (US 6,661,999) disclose system for increasing RF power as a constant over a temperature range and employing reduced transmitter current drain during low power output periods.

Buer (US 6,771,930) discloses system and method for uplink power control.

Uesugi (US 6,795,694) discloses automatic gain control system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quochien B. Vuong whose telephone number is (571) 272-7902. The examiner can normally be reached on M-F 9:30-18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



QUOCHIEN B. VUONG  
PRIMARY EXAMINER

Quochien B. Vuong  
Mar. 04, 2006.